

**Statement of Work
for
Rebuild of the Radio Set, AN/GRC-193(V)B
NSN 5820-01-270-5103**

SOW-01-847-2-09213A-1/1

**Prepared by
Life Cycle Management Center, Code 847-2
Marine Corps Logistics Bases, Albany, GA.**

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STATEMENT OF WORK FOR THE
Rebuild of the Radio Set, AN/GRC-193(V)B
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1.0 Scope. This Statement of Work (SOW) establishes and sets forth tasks and identifies the work efforts that shall be performed by the Contractor (for purposes of this SOW, Contractor is defined as the commercial or government entity performing the rebuild in the rebuild effort of the Radio Set. This document contains requirements to restore the Radio Set to Condition Code "A." Condition Code A is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitation or restriction, including materiel with more than 6 months shelf-life remaining."

1.1 Background. Rebuild is defined as "That maintenance technique to restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through a maintenance technique or complete disassembly of the item, inspection of all parts or components, repairs or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the items."

2.0 Applicable Documents. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards.

MIL-STD-129	DoD Standard Practice for Military Marking
MIL-STD-2073-1C	DoD Standard Practice for Military Packaging

Military Standards (For Reference Only).

MIL-STD-973	Configuration Management
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2.2 Other Government Documents and Publications. The issues of those documents cited below shall be used.

TM-07749A/07743-12/1A	Radio Set AN/GRC-193	Dec 1986
	Radio Set AN/MRC-138A	PCN 184 075260 00
	System Instructions	

TM-07749B-45/2 TM -115820-1045-34	General Support, Direct Support & Depot Maintenance Manual	June 1992 PCN 184 077491 00
TM-07748A-45/2 TO31R2-2PR-104-2	Field Maintenance Instruction AN/PRC-104	Jan 1979 PCN 184 075258 00
TM-07748A-45/3	Maintenance Prints AN/PRC-104	Nov 1981 PCN 184 075259 00
SL-4-07748A TO31R2-2-PRC-104-4	Repair Parts List AN/PRC-104	Apr 1979 PCN 124 077480 00
SL-4-07743A/07749A	Repair Parts List For Radio Set AN/MRC-138 /GRC-193	Dec 1980 PCN 124 077430 00
Design Control Reference	Cage 14304	P/N 755017A1010
TM-4750-15/2	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment	
Drawing 755017C1010	Radio Set, AN/GRC-193(V)B	
Drawing 755017C4010	Plate, Identification, Radio Set, AN/GRC-193B	
TI-5820-25/22		PCN 168 047801 00
DOD 4000.25-1-M	MILSTRIP Manual	
NAVICPINST 4491.2A	Requisitioning of Contractor Furnished Material From The Federal Supply System	

2.3 Industry Standards.

ANSI/EIA 625	Requirements for Handling Electrostatic-Discharge Sensitive ESDS Devices
ANSI/ISO/ASQC Q9002-1994	Quality Systems-Model for Quality Assurance in Production, Installation and Servicing

Copies of Military Standards and Specifications are available from the DOD Single Stock Point, Defense Automation Production Service Philadelphia, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697- 2179 or DSN 442-2179, or <http://www.dodssp.daps.mil>. Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the contracting officer: Commander, Marine Corps Logistics Bases, (Code 891) Attn: Contracting Officer, 814 Radford Blvd., Albany, Georgia 31704-1128, commercial telephone number (912) 439- 6773 or DSN 567-6773. Copies of engineering drawings, if applicable, shall be obtained from Life Cycle Management Center, Attn: Code 825-3, 814 Radford Blvd. STE 20320, Albany, Georgia 31704-0320, commercial telephone number (912) 439-6410 or DSN 567-6410.

3.0 Requirements.

3.1 General Tasks. In fulfilling the specified requirements, the Contractor shall:

a. Provide materials, labor, equipment, facilities and missing/repair parts, necessary to inspect, diagnose, restore, and test and calibrate the Radio Set. Upon completion of rebuild, the subject item shall be Condition Code "A."

b. Conduct in-process and final on-site testing for witness by a Marine Corps authorized representative.

3.2 Detail Tasks. The following tasks describe the different phases for rebuild of the Radio Set.

3.2.1 Phase I- Pre-Induction. A pre-induction inspection analysis shall be performed for each Radio Set using the Contractor Facility's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated on the Pre-Induction Checklist (Appendix A).

3.2.2 Phase II -Rebuild. After pre-induction tests and inspections have been completed, repair of the Radio Set shall be accomplished in accordance with this SOW. Deficiencies noted on the Pre-Induction Checklist (Appendix A) during Phase I shall be repaired/replaced. Components or assemblies shall not be disassembled for replacement of parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair. Any Modification Instructions or Engineering Change Proposals not previously applied shall be incorporated.

a. Data Plate. Each repaired Radio Set shall have a rebuild data plate affixed to the Radio Set in accordance with drawings 755017C4010 and 755017C1010. Any Modification Instructions or Engineering Change Proposals not previously applied shall be incorporated.

b. Hardware.

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turn lock fasteners, mandatory replacement items, safety, and one-time use items, etc., in accordance with this SOW. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

3.2.3 Phase III - Inspection, Testing and Acceptance.

a. Inspection, Testing and Acceptance of the Radio Set shall be conducted in accordance with TM-07749A/07743-12/A; TM-07749B-45/2; TM-155820-1045-34; TM-07748A-45/2; TO31R2-2PR-104/2; TM-07748A-45/3; SL-4-07748A; TO31R2-2-PRC-104-4; SL-4-07743A/07749A; Design Control Reference, CAGE 80372, P/N 755017A1010; TM-4750-15/2; Drawings 755017C4010 and 755017C1010 and TI-5820-25/22. Any Modification Instructions (MIs) or Engineering Change Proposals (ECPs) not previously applied shall be incorporated.

b. The Contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are notified prior to completion of the final acceptance. Acceptance tests shall be held at the contractor's facility, MCLB (Code 847-2), Albany, Georgia, representatives shall be given a minimum of two weeks notice prior to commencement of acceptance testing.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCLB (Code 847-2), Albany, Georgia, representatives may require the Contractor to repeat tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

3.2.4 Packaging, Handling, Storage and Transportation (PHS&T)

a. The Contractor shall be responsible for preservation and packaging of the items being repaired under the terms of this statement of work. Items being prepared for long term storage or shipment to overseas destinations shall be in accordance with the level "A" requirements of MIL-STD-2073-1C, Appendix A, Table A.VI., Electronic Equipment. Items being prepared for domestic shipment and immediate use shall be to level "B" requirements.

b. Marking shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the Contractor with the shipping address(es) for delivery of the repaired equipment. The Contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for all costs associated with shipment to and from the Contractors facility.

3.3 Configuration Management.

3.3.1 Configuration Control. The contractor shall apply configuration procedures to establish configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without receiving prior written authorization. If it is necessary to depart from the authorized configuration baseline, the contractor shall submit a Request for Deviation or Request for Waiver using MIL-STD-973 (paragraph 5.4.3 or 5.4.4 and Appendix E) as a guide.

3.4 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). GFE is government owned equipment authorized by contract for use by a Commercial/Government Contractor. It is neither consumed during production nor incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into the product being manufactured/remanufactured under a contract/statement of work. In the event the Marine Corps does have GFE/GFM requirements the Management Control Activity (MCA/Code 827-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets. The contractor shall report receipt of all GFM and report consumption of GFM to the MCA.

3.5 Contractor Furnished Materiel. The Marine Corps has adopted the Navy's procedures regarding Contractor Furnished Materiel (NAVICPINST 4491.2A). In the event that Contractor Furnished Materiel is required for repair parts, the Contractor shall requisition through the DoD Supply System. DoD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DoD Supply System.

3.6 Electrostatic Discharge (ESD) Control Program. The contractor shall establish, implement and document an ESD control program following the guidelines provided in EIA-625. ESD protective measures shall be used during manufacturing, handling, inspection, test, marking, packaging, storing and transporting ESD sensitive components.

3.7 Electromagnetic Environmental Effects (E3) Procedures. The Contractor shall plan for and use proper (E3) control procedures in the Rebuild process and shall utilize TI-5820-25/22 in conjunction with the detailed requirements specified in this document.

3.8 Quality Assurance Provisions.

The Contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9002-1994, Quality System Model for Quality Assurance in Production, Installation, and Servicing. The program shall ensure quality throughout all areas to include fabrication, processing, assembly, inspection, test, maintenance, and preparation for delivery and shipping. Unless otherwise specified in the contract, the contractor shall be

responsible for performance of all inspection requirements. The Government reserves the right to perform any of the inspections set forth in the contract where such inspections are deemed necessary to assure products and services conform to the prescribed requirements. The Contractor shall provide an Inspection and Test Plan that will ensure the Radio Set will meet or exceed the original performance characteristics of the Radio Set.

3.9 Acceptance.

The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and Marine Corps representatives shall be permitted to observe the work or to conduct an inspection. Final inspection and acceptance testing shall be conducted at the Contractor's Facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

3.10 Rejection.

Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCLB (Code 847-2), Albany, representative. The Contractor shall, at no additional cost to MCLB, Albany, Georgia, correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedures is demonstrated.

Pre-Induction Checklist

AN/GRC-193B(V)B

1. Using the following criteria, inspect the items listed below.
 - a. Refer to SOW-8352-08770A-1/1 for HMMWV inspection checklist.
 - b. Inspect for dirt, dust, sand, etc.
 - c. Inspect for rust and/or corrosion damage.
 - d. Inspect for any physical damage to different units. (cuts, dents, cracks, broken pins, etc.)
 - e. Ensure that all screws, washers, nuts, bolts, etc. are attached.
 - f. Inspect for dry rot on all rubber and plastic components.
 - g. Ensure that all covers and caps are attached.
 - h. Ensure that all knobs, switches and breakers operate freely and properly.
 - I. Inventory for accountability.

S - Serviceable

U - Unserviceable

M - Missing

Rack Assembly and Hardware:

	<u>Qty</u>	<u>Condition</u>	<u>Remarks</u>
1. Rack, Electrical Equipment, MT-6014	1		
2. MT-4874/URC, RT-1209A & AM-6879 mount	1		
3. RT 1209A Clamps	2		
4. AM-6879 Clamps	2		
5. MT-4495, CU-2064A mount	1		
6. Coupler hold down clamps, bolted down, fixed.	2		
7. Coupler hold down clamps, thumb screw, adj.	2		
8. MT-4497, AM-6545B mount	1		
9. Amplifier hold down clamps, bolted down, fixed.	2		
10. Amplifier hold down clamps, thumb screw, adj.	2		
11. Hanger, Fiberglass, for W5, Coupler coax cable	1		

Cable Assemblies:

1. W3, Power Supply PP-7333 to AM6545B	1		
2. W1, RF, AM-6545B to AM-6879	1		
3. W2, Audio, RT-1209A to AM-6879	1		
4. W1, Pwr/Control and RF, RT-1209A to AM-6879	1		
5. W6, Pwr/Control.. AM-6545B to CU-2064A	1		
6. W7, KY-65 to AM-6879	1		
7. W2, Pwr/Control, AM-6879 to AM-6545B	1		
8. W5, RF, CU-2064-AM-6545B	1		
9. W14, KY-65 to AM-6545B	1		
10. High Voltage RF, CU-2064 to Antenna	1		

APPENDIX A

CU-2064A Antenna Coupler Inventory/Serviceability Check:

- | | | | |
|-----|------------------------------|-------|-------|
| 1. | 50 Ohm Antenna Connector, J3 | _____ | _____ |
| 2. | Pressure relief valve | _____ | _____ |
| 3. | Whip Antenna Connector, J4 | _____ | _____ |
| 4. | Ground Studs, w/wingnuts | _____ | _____ |
| 5. | CONT Connector, J2 | _____ | _____ |
| 6. | RF Connector, J1 | _____ | _____ |
| 7. | Fan Intake | _____ | _____ |
| 8. | Flag Switch | _____ | _____ |
| 9. | Handles | _____ | _____ |
| 10. | Chassis | _____ | _____ |

AM 6545B Power Amplifier Inventory/Serviceability Check:

- | | | | |
|-----|-----------------------------|-------|-------|
| 1. | Meter, M1 | _____ | _____ |
| 2. | RDY Light, DS1 | _____ | _____ |
| 3. | XMT Light, DS2 | _____ | _____ |
| 4. | TUN Light, DS3 | _____ | _____ |
| 5. | FIL Fault Light, DS4 | _____ | _____ |
| 6. | PA Fault Light, DS5 | _____ | _____ |
| 7. | CPLR Fault Light, DS6 | _____ | _____ |
| 8. | Fan Intake | _____ | _____ |
| 9. | FAN/LAMP TEST Switch | _____ | _____ |
| 10. | RF Connector, J5 | _____ | _____ |
| 11. | PWR Connector, J3 | _____ | _____ |
| 12. | RT CONT Connector, J2 | _____ | _____ |
| 13. | CB1, Circuit Breaker | _____ | _____ |
| 14. | ANT/CPLR CONT Connector, J1 | _____ | _____ |
| 15. | ANT/CPLR RF Connector, J4 | _____ | _____ |
| 16. | Handles | _____ | _____ |
| 17. | Chassis | _____ | _____ |

RT 1209A Receiver/Transmitter Inventory/Serviceability check:

- | | | | |
|----|---|-------|-------|
| 1. | MODE Switch, (V REC, V TR, D TR, D REC), S8 | _____ | _____ |
| 2. | ON/OFF VOLUME Switch, S9/R1 | _____ | _____ |
| 3. | LIGHT, S10 | _____ | _____ |
| 4. | SB Switch, (LSB, USB) S7 | _____ | _____ |
| 5. | Audio Connector, A2J1 and A2J2 | _____ | _____ |
| 6. | Frequency Selector Pushbutton Switch, S1-S6 | _____ | _____ |
| 7. | RT Connector, J1 | _____ | _____ |
| 8. | Handles | _____ | _____ |
| 9. | Chassis | _____ | _____ |

APPENDIX A

AM-6879 Amplifier-Converter Inventory/Serviceability Check:

1. Speaker, LS1	_____	_____
2. Adjust Knob, R2	_____	_____
3. Selector Switch, S3	_____	_____
4. Meter Jacks, TP1 and TP2	_____	_____
5. TTY/OFF/SPKR Switch, S1	_____	_____
6. Audio/Handset Connector, J1 and J2	_____	_____
7. 3 Amp Fuse, F1	_____	_____
8. On/Off/Squelch Switch, S2/R1	_____	_____
9. TTY Key Binding Post, E1 and E2	_____	_____
10. DC Loop Binding Post, E3 and E4	_____	_____

Accessories Inventory/Serviceability Check:

	<u>Qty</u>	<u>Condition</u>	<u>Remarks</u>
1. Adapter, Antenna to Antenna Base	1	_____	_____
2. Case, Accessory,	1	_____	_____
3. Handset, H250A	1	_____	_____
4. CW Key, Telegraph	1	_____	_____
5. Lead, Electrical	1	_____	_____
6. Cover, Antenna, Rubber	1	_____	_____

APPENDIX A

(1 Data Item)

OMB No. 1704-0188

The Public reporting burden for this collection of information is authorized to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contract Officer for the contract/PR no. listed in block E.

A. CONTRACT LINE ITEM NO.		B. EXHIBIT		C. CATEGORY: TDP _____ TM _____ Other <u>XXX</u>					
D. SYSTEM/ITEM Radio Set, AN/GRC-193(V)B			E. CONTRACT/PR No.		F. CONTRACTOR				
1. DATA ITEM No. A001	2. TITLE OF DATA ITEM Request for Waiver (RFW)			3. SUBTITLE Configuration Management					
4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80641B			5. CONTRACT REFERENCE SOW 3.3.1		6. REQUIRING OFFICE MARCORLOGBASES 825				
7. DD 250 REQ. LT	9. DIST STATEMENT REQUIRED A	10. FREQUENCY AS REQ	12. DATE OF FIRST SUBMISSION See Blk 16	14. DISTRIBUTION					
8. APP CODE A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION	a. ADDRESSEE	b. COPIES				
16. REMARKS					FINAL				
				Draft	Reg	Repro			
<p>Block 4: Contractor format is authorized.</p> <p>Blocks 10 & 12: RFWs shall be submitted to obtain authorization to deliver nonconforming material which does not meet the prescribed configuration documentation.</p> <p>RFWs will be reviewed and disposition determined within 20 working days upon receipt by the government.</p> <p>RFWs shall be transmitted via e-mail to the following address: <u>mbmatcomconfigmngmnt@matcom.usmc.mil</u></p> <p>Distribution Statement A: Approved for public release, distribution is unlimited.</p>				MCLBA 825-2	0	1	0		
				15. TOTAL					

18. ESTIMATED
TOTAL PRICE

J. DATE

000223

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 1704-0188

The Public reporting burden for this collection of information is authorized to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government issuing Contract Officer for the contract/PR No. listed in block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP TM Other XXX
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D. SYSTEM/ITEM Radio Set, AN/GRC-193(V)B	E. CONTRACT/PR No.	F. CONTRACTOR
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1. DATA ITEM No. A002	2. TITLE OF DATA ITEM Request for Deviation (RFD)	3. SUBTITLE Configuration Management
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4. AUTHORITY (Data Acquisition Document No.) DI-CMAN-80640B	5. CONTRACT REFERENCE SOW 3.3.1	6. REQUIRING OFFICE MARCORLOGBASES 825
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7. DD 250 REQ. LT	9. DIST STATEMENT REQUIRED A	10. FREQUENCY AS REQ	11. AS OF DATE	12. DATE OF FIRST SUBMISSION See Blk 16	13. DATE OF SUBSEQUENT SUBMISSION	14. DISTRIBUTION a. ADDRESSEE MCLBA 825-2	b. COPIES Draft Reg Repro
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16. REMARKS Block 4: Contractor format is authorized. Blocks 10 & 12: RFDs shall be submitted to obtain authorization to deliver nonconforming material which does not meet the prescribed configuration documentation. RFDs will be reviewed and disposition determined within 20 working days upon receipt by the government. RFDs shall be transmitted via e-mail to the following address: mbmatcomconfigmngmnt@matcom.usmc.mil Distribution Statement A: Approved for public release, distribution is unlimited.	15. TOTAL
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G. PREPARED BY: Gene Collins	H. DATE JAN 20 1999	I. APPROVED BY: Robert H. Elumaku	J. DATE 000223
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17. PRICE GROUP
18. ESTIMATED TOTAL PRICE